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ABSTRACT

This study was conducted to map the range of research-related links between charities and higher education institutions (HEIs) and to make recommendations on how these links could be developed to the mutual advantage of both sectors. The research methods used for the review are described in an associated mapping report, published separately. Charity-funded research is of vital importance to the higher education sector and the national research effort. It is comparable in volume to research funded by the Research Councils, and greater in volume in the medical field. Both HEIs and charities are generally pleased with their relationships in terms of the quality and relevance of the research and their relationship but it appears that HEIs could take a more strategic approach to their whole research enterprise. The principle that charities do not pay indirect costs of project work means that institutions need to understand the financial and infrastructure requirements of the mix of research in their portfolios. The Higher Education Funding Council for England should seek an increase in its research funds to support HEIs, and charities should be invited to pay the full direct costs of all projects. These and related changes would support a sustainable basis for research relationships between charities and HEIs. (SLD)

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February
02/07
Research report

Research relationships between higher education institutions and the charitable sector

A report by JM Consulting to the HEFCE on policy

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Executive summary

1. The purpose of this study for the HEFCE, as described in this publication and the companion report (HEFCE 02/07a) is to map the range of research related links between charities and higher education institutions (HEIs) and to make recommendations on how these links could be developed to the mutual advantage of both sectors. The study covers the whole of the UK.

Charity-funded research in HE institutions

2. Charity-funded research is of vital importance to the higher education (HE) sector and to the national research effort. It is comparable in volume to research funded by the Research Councils – and within the medical field is significantly greater in volume. The rapid growth of charity funding in the biosciences, including the outstanding contribution of the Wellcome Trust, has enabled the UK to remain a leading player in an expensive and competitive area of science, with great benefits to the economy and to the health of the nation.

3. Charities are also significant research sponsors in the social sciences; social policy; and in the humanities. In these fields, there are few alternative sources of research funding, and charities have made a particular contribution. This has sometimes involved providing long-term support to researchers and groups and a stimulus to address issues of social, political and practical importance which are not always well recognised by traditional academic criteria, reinforced by the Research Assessment Exercise (RAE).

4. A large part of the research funded by charities is of high academic quality, and relevant to national needs. This could be described as equivalent to the work funded by Research Councils. At its best, charity funding can facilitate openness and cooperation between academics and institutions working for a common public good. Charities can also sometimes be more flexible and innovative than public funders, and this can foster excellent research.

Benefits and concerns in the relationships

5. Both HEIs and charities are generally pleased with their relationships in terms of the quality and relevance of the research, and their ability to do business with each other. However, there are a number of ways in which the potential of these relationships is not being maximised.

6. Firstly, HEIs could take a more strategic approach to their whole research enterprise. For many institutions, this is a core business, requiring long-term investment in staff and infrastructure, and careful management of their portfolio to maximise academic, social, and financial returns on the work. Secondly, there are important issues about professionalism in project management, for both charities and HEIs. Thirdly, HEIs need to give a higher priority to the management and support of research staff who are frequently employed on short-term contracts.

7. The most critical issue for this study is the financial return that HEIs receive on charity-funded research. Most externally funded research done by HEIs is priced considerably below the full cost of doing the work. This is a concern in the context of reductions in the unit of funding for teaching, and the past under-investment in infrastructure within HEIs. It will require solutions that are relevant across all HE activity. However, the focus of this study is on HEIs' research relationships with charities, which need to be on a sound financial and strategic basis for the future.

Financial context

8. The principle that charities do not pay indirect costs of project work (in contrast to the Research Councils, which contribute 46% on eligible direct staff costs) means that institutions need to understand the financial and infrastructure requirements of the mix of research in their portfolios.

9. The HE sector has accumulated liabilities in terms of under-investment in its research infrastructure: buildings; equipment; technical staff; IT; libraries and information resources.

10. Research funded by charities in HEIs is not formally supported within the dual support system, under which the funding councils' formula funding provides infrastructure support to the project grants provided by Research Councils. The scope of dual support is unclear. Some charities perceive that their research was included under dual support in the 1970s or early 1980s. However, the funding councils' funds for research have not grown sufficiently to underpin the growth in volumes of Research Council and charity-funded projects, and so, in effect, institutions have not had Treasury support for the infrastructure required to support charity-funded research.

11. In England, HEFCE do recognise this in the way they distribute their research funding (called quality-related research funding or QR). While QR has not grown enough to underpin the growth in charity-funded activity, HEFCE have allocated a proportion of their funds to institutions on the basis of income from charity-funded research. This is not widely understood in institutions, and this element of funding may or may not be used by them to underpin infrastructure for charity-funded research. (In Scotland, SHEFC makes a different redistribution of funding, one which recognises charity-funded research income.)

12. The HEFCE approach is not as advantageous for the HEIs as including charity-funded work within the dual support system (which would require a growth in total funds). Nevertheless, it means that in the most favourable circumstances (for a 5* biosciences department) the institution's cost recovery on charity-funded projects comes close to parity with that for Research Council projects. Both are in deficit.

13. There is evidence that deficits on investment in infrastructure and on current cost recovery are damaging the quality, breadth, and sustainability of the best UK research. Indicators of this include lost research output; difficulties in recruiting and retaining top research staff; and distortion of priorities and

inefficient use of professional staff time. These strains are not dramatically apparent in research quality or outputs because academics and institutions make heroic efforts to work around problems, and any damage will only appear over long time scales. However, there is a cost in terms of lost opportunities, reduced productivity, and damage to future capability.

14. Overall, the current funding is not a basis for viable and mutually beneficial relationships between charities and institutions, particularly those with medical schools and an elevated level of charity-funded research.

Charities and indirect cost reimbursement

15. The convention that charities do not contribute to the indirect cost of research projects is just one stress on an already highly strained system. Many would accept that smaller charities, and those which depend on public donations, cannot afford to pay indirect costs without reducing the volume of research supported. The larger endowed charities argue that it is the Government's responsibility to ensure the basic research infrastructure. If they could not rely on this being in place, some charities might reduce their funding into UK HE.

16. Charities do contribute to the research infrastructure. This is often through additions (e.g. of equipment) to research grants, but also through specific schemes to fund equipment or other infrastructure. The current contribution of the Wellcome Trust through the Joint Infrastructure Fund (JIF) and the Science Research Investment Fund (SRIF) is outstanding in this regard.

17. We believe that charities are sympathetic to the needs of HEIs, and that there is a mutual interest in achieving a more sustainable funding basis for charity research projects. We advocate a tripartite initiative in which charities, HEIs and HEFCE would each contribute towards this. The spirit would be one of partnership of the HE and charitable sectors working together to maximise the benefits from limited funds for research, and investing to maintain the research base for the future. This should lead to a mutually beneficial "something for something" outcome for all.

A way forward

18. We do not believe that charities should pay the full economic cost of projects, or that the volume of such work should be cut back to the point where current funding would cover full economic costs. Both would be highly damaging to research relationships between the charity and HE sectors, and to the UK research base.

19. We propose a partnership approach, in which HEFCE would re-launch the dual support principle with QR funding ideally at the level that we now know (through the Transparency Review) is needed to underpin 'Research Council equivalent' research funded by charities, so that HEIs are not financially disadvantaged by doing such work.

20. In summary, our recommendations are:

One: HEFCE should seek an increase in its research funds so that it can provide an explicit stream of additional infrastructure support to HEIs on their eligible charity-funded research. This will be a fixed sum which ideally should provide equivalent support to that which HEIs receive directly from the Research Councils, plus what they are assumed to receive through the dual support system in respect of Research Council grants. It would be distributed to institutions retrospectively.

Two: HE institutions which wish to be eligible for this additional HEFCE infrastructure support for charity-funded research should implement good practice in research management to ensure that additional funding is used to support infrastructure and research careers in a sustainable manner.

Three: Charities funding significant volumes of research in HE should be invited to commit themselves to pay the full direct costs of all projects, including a contribution to the (currently often hidden) costs of investment in people and project management in institutions. In return, they would benefit from knowing that the research they fund in HEIs would benefit from additional infrastructure support and a more sustainable research base.

Four: HEFCE should establish a small group with representatives of both the charity and HE sectors to take these issues forward.

21. Changes along these lines are practical and necessary to achieve a sustainable basis for research relationships between charities and HEIs. This could transform the perception of charity-funded research and enable it to realise its full potential. Without such action, the issue of cost recovery will continue to damage relationships, and the UK risks losing its pre-eminence in many of research fields, and long-term damage to parts of its research capability.

1 Introduction

1.1 This policy report is part of a review conducted for the HEFCE of research relationships between charities and higher education institutions (HEIs). This report focuses primarily on issues relevant to the policies of the HEFCE. These relate to the funding of charity-supported research in higher education, and to good practice by HE institutions.

1.2 The associated mapping and good practice report (which is published on the HEFCE web-site as HEFCE 02/07a) covers information on the extent and nature of research relationships in the HE and charity sectors, and a discussion of good practice in the development and management of these relationships.

1.3 The research methods used for the review and a list of organisations and individuals who contributed are included in the mapping report. While this report is addressed to HEFCE, the research covers the whole of the UK, as do the conclusions and recommendations.

2 Overview of activity

2.1 Charity funding of research in higher education has grown rapidly in recent years, particularly in the biosciences and medical research area.

2.2 The value of all charity-funded research in UK HE in 1999-2000 was £484m (England £401m), which made up 25% of all research grant and contract income to HEIs. This is greater than the income from UK government or EU contracts, and less than that from the Research Councils. The level of activity is equivalent to that funded by Research Councils.

2.3 A major part of charity funding in the HE sector is concentrated in a relatively small number of academic discipline areas in medicine and the biosciences and a few research-intensive universities. Within these fields, charities fund more research than the Research Councils, and the role of the charity sector is crucial to the health and productivity of the UK research base, and the overall profile of the institutions.

2.4 In other fields, notably the social sciences and the humanities, charity funding also plays an important part in the national research effort.

2.5 The HE sector is equally important for the charities. On average, about three-quarters of all research funded by UK charities is done in HEIs, which are seen as providing the credibility of independent academic institutions, and an accessible source of expertise and high quality work.

Charity funding in HEIs

2.6 Higher education financial statistics show that the volume of charity-funded research income has grown steadily from £156m (England £132m) in 1989-90 to £484m (£401m) in 1999-2000. This is a growth of approximately 200% over the 11-year period. This has grown at broadly the same rate as the total of research grants and contacts, so that charity research has remained between 20% and 25% of the total funding (and about a third of total activity) throughout the decade.

2.7 Statistics collected by the Association of Medical Research Charities (AMRC) show that funding for medical research by charities within the AMRC has grown from £177m in 1989-90 to £552m in 1999-2000. The basis for this information is not the same as the HE data above, but it shows the same trend.

2.8 The total amount of charity support to HE research has been greater than shown in these figures for research grants and contracts, because there has also been capital funding for research infrastructure which is generally excluded from the HE and AMRC statistics. The Wellcome Trust contribution to infrastructure funding has not been the only one but it has been the major contribution, particularly recently through the JIF and SRIF infrastructure support programmes which are not included in the statistics above.

2.9 The growth of approximately 200% in charity funding of research activity over the past decade can be contrasted with the decline in the unit of resource for teaching over the same period, and the relatively modest growth in HEFCE block grant funding for research (QR). QR in England grew from £432m in 1989-90 to £738m in 1999-2000 (70% in 11 years). QR is expected to fund HEIs' own blue-skies research where there is no external sponsor; and to support the infrastructure needs of work funded by Research Councils at less than full economic cost.

2.10 There is some ambiguity about the working of this dual support system, but it is clear that the sums of public money available to the funding councils have not grown sufficiently to match the growth in research volumes, including charity-funded research, and there has therefore been no direct public funding to support the infrastructure for charity research. HEFCE makes an internal allocation to recognise the charity income attracted by institutions, but this is a re-allocation of existing HE funds rather than a new funding stream to support additional research infrastructure.

The charity sector and its funding of research

2.11 The charity sector is large and diverse. The definitions used for this study encompass approximately 135,000 charities with an annual income of approximately £13bn (National Council for Voluntary Organisations data).

2.12 Outside of the medical fields (where the AMRC statistics can be used) it is difficult to find comprehensive and consistent data on charities' expenditure on research other than by referring to individual charities. We have therefore conducted surveys and other research on the charity sector and its involvement in research, and these are reported in the mapping report.

2.13 There is a wide variety of types of charity which can be categorised by size; source of funds; the nature of their purpose and constitution; and field of activity. These distinctions can help HEIs to understand the type of organisation they are dealing with.

2.14 It is also useful for institutions and academics to be aware of the chief differences between charities and the Research Councils:

- charities are not public bodies and are not publicly accountable in the same way as Research Councils;
- they are accountable through their trustees to the Charity Commission which constrains their activity –e.g., they are obliged to keep to the charitable purposes for which they are registered, and those which raise funds from the public have also to be accountable to their donors;
- many charities spend only a fraction of their income on research which may for them be an occasional activity and a means to an end; for others it is a primary purpose and their spending reflects this.

2.15 The other difference is that by a well-established convention, charities do not generally pay indirect costs ('overheads') on research projects.

Types of funding

2.16 Charity funding for research could broadly be categorised into four main types:

a. grants which support activity: e.g. project and programme grants;

b. grants which support people: studentships and fellowships;

c. grants which include a contribution to research infrastructure: e.g. units, centres, equipment, buildings (JIF and SRIF are examples);

d. charitable donations which can in certain circumstances be used for research.

2.17 HEIs will need to find finance to match the indirect costs and infrastructure needs of charity research funding of types (a) and (b) above, but not of types (c) and (d). In practice, most HEIs receive a mix of these types of funding and therefore it is hard to draw general conclusions about any deficit in funding of research infrastructure or indirect costs in a particular institution.

The range of institutions funded

2.18 The HE sector in the UK includes a diverse range of approximately 170 institutions (about 130 in England). We have classified these into three groups in terms of their research profile and the way they appear to the charity sector in the mapping

document (HEFCE 02/07a). In general, the financial impact of charity funding will be felt differently between these groups.

2.19 At the risk of some simplification, we can say that the group of about 20 research-intensive, multi-faculty universities with medical schools is where the major part of all charity funding in the sector is concentrated, and where stresses associated with infrastructure requirements will be most keenly experienced. Within this group, there are five institutions which account for half of all charity funding in HE and where these issues are particularly acute.

2.20 In other institutions (which numerically form the majority of the sector, but a minority of its research) any charity funding of research is normally more widely distributed and less critical to the mission of the institution. The decision to proceed with a particular project or application (for charity funding) might be said to be more discretionary, and the attitude of these institutions to indirect cost recovery is therefore generally rather different.

2.21 Like the charity sector, the HE sector is therefore not homogeneous in terms of the issues covered in this report.

3 Benefits and issues in the relationship

3.1 The overall picture is that there are substantial benefits to both charities and HEIs from successful research relationships, but also some serious issues to address.

Charities view

3.2 For the charities which fund research, HEIs provide a relatively accessible and highly credible source of expertise to enable them to conduct quality research. This is reflected in the generally high levels of charity satisfaction with the work done by HEIs, and the fact that, overall, charities spend about three-quarters of their research funds in UK HEIs.

3.3 Particular benefits which are quoted by charities include:

- the strong base of quality research staff;
- a critical mass of work;
- an infrastructure to support research;
- the credibility and reputation of HEIs;
- effective dissemination of results (not just publication);
- public sector/not-for-profit partners;
- ability to contribute to the national research effort.

3.4 However, charities also raised concerns about the relationship; these mostly focus on project management and funding.

3.5 Charities perceive that while the quality of the research is good, many universities are not well adapted to deal with managing projects. Comments are often made about (e.g.) an apparent lack of integration between the academic and financial management. This is connected to a perception that control and management of projects at departmental level can leave something to be desired.

3.6 These project management issues are not specific to HEIs' relationships with charities: they would have an impact on HEIs' ability to serve other external clients. They could be alleviated within HEIs themselves with some good practice, including training and support for academics and others dealing with external sponsors.

3.7 The more difficult set of issues relate to funding; the treatment of indirect costs and a perceived decline in the adequacy of the university infrastructure to support externally funded research. The key points are:

- a perception that universities are increasingly stretched beyond a reasonable limit, and funding imperatives make them overly concerned about measurable academic research outputs to the detriment of more policy or practice-related projects;
- a perception that universities are seeking to use research grants to fund basic items of research infrastructure which should be provided as part of a 'well-found laboratory'.

3.8 The issues in this second category are not so much with the HEIs themselves as a reflection of the national funding situation, which charities understand.

3.9 It is worth dispelling any perception that things are much better overseas (e.g., in the USA). Charities generally find UK HEIs compare favourably with those overseas in terms of their costs, flexibility and willingness to negotiate, but they find a more structured approach to career development in the USA.

HEIs' view

3.10 Charity funding of research is very important for the HE sector. Many research staff, and much leading research, would simply not be funded without charity support. Much charity-funded research is of a high academic quality and relevance to national research objectives; in this sense it could be seen as 'equivalent' to work funded by the Research Councils and therefore very important for HEIs' research strategies.

3.11 There are specific advantages of some charity funding for HEIs, which include:

- the academic prestige and peer recognition that goes with work for the leading national and international charities;
- some charities are perceived as willing to fund work which would be unlikely to attract support from other funders like the Research Councils;
- charities are sometimes more flexible in what they will fund, e.g., contingency payments, extensions of grants;

- some charities are inclined to build closer and longer-term relationships with particular institutions and researchers;
- some regional and local charities provide funding for less-research-intensive universities, often with a lower level of scrutiny and competition than the larger funders, and this can be vital in helping such institutions to establish a research profile;
- charities are often perceived to be less bureaucratic than the Research Councils. This is connected with the different nature of the organisations and the absence of the specific requirements of public accountability.

3.12 There are a number of non-financial issues for HEIs. These are discussed in the mapping report (HEFCE 02/07a). They broadly relate to three main areas:

a. the nature of charities and the fact that they behave differently from the Research Councils – academics are not always prepared for this;

b. issues around the management of research staff and their careers, which are not specific to charities but are significant for HEIs with a large charity-funded research portfolio. It is notable that in the UK, 30% of institutions' full-time staff and 80% of research-only staff are financed wholly or partly through sources other than the institution. Approximately one-third of these are funded by charities;

c. issues around the applications process, peer review, and project management.

3.13 However, for the group of HEIs identified above, the issue which eclipses all others is the financial strain of accepting high quality charity projects without either a contribution to indirect costs (which they receive from Research Councils), or indirect support for infrastructure (which they receive in respect of Research Council projects under dual support).

Issues about cost recovery

3.14 The most important issue for HEFCE policy is therefore the level of cost recovery by HEIs on charity-funded projects and the impact this has – both on the financial stability of individual institutions, and on the future productivity and sustainability of the UK research base in higher education.

3.15 This is part of a broader issue for the sector – it is about the total funding of research, and is not specific to HEI-charity research relationships. This review addresses the issue in terms of charities and their funding of research, but any fully satisfactory solutions to the issue will have to cover a much broader area than charity-funded research. This would imply a review of the whole dual support system.

3.16 There are three critical elements to the background to this issue:

a. for a combination of reasons which are being studied elsewhere, few if any institutions have managed to invest adequately to maintain their research infrastructure;

b. at the same time, there have been strong incentives for institutions to increase the volume and quality of their research activity. Many have done this, both as a valuable contribution to national economic and social objectives, and as a perceived way to diversify their income, and to build an academic reputation;

c. almost all this research activity has been externally funded by research sponsors – including charities, Research Councils, the EU, UK government departments (and often private industry) – paying less than the full economic cost to the institutions of the research conducted.

3.17 This situation might be manageable if research was a marginal activity for institutions, or if QR funds had grown at the same pace as the total of project funds, but neither is the case. A number of HEIs believe that the growth of medical charity funding, without commensurate support for indirect costs, has created an imbalance in their institutions with one discipline area commanding and consuming a disproportionate share of their limited resources (such as accommodation).

3.18 This puts a strain on the research infrastructure, and can damage other areas of provision. There is widespread agreement that areas which are suffering in this way include investment in staff; research in the arts and humanities; innovation in teaching; and general institutional infrastructure including libraries and IT networks.

Charity view on cost recovery

3.19 The medical charities are understandably unimpressed by such complaints. They point out that they are contributing large sums into higher education research; that institutions are not compelled to seek charity funding for research; and that, if they do so, HEIs should ensure that they can manage the impact of this additional funding within their own institutions.

3.20 This view was expressed in a speech by Mike Dexter (Director at the Wellcome Trust) to the Save British Science Society (4 April 2001) where he said that it is not the charities' role to provide the basic university infrastructure and utilities costs: 'The medical research charities were not established to invest in bricks and mortar... Nor were we set up to pay for lighting, heating, water, security, building maintenance or uniforms. Rather our mission is to help the State find cures for disease and to increase knowledge for the health benefit of humankind.'

3.21 This is a matter of principle for charities, and those (like Wellcome) which arguably could afford to pay full costs are unlikely to agree to do so because of the question of principle, and the practical impact such action would have on many smaller fund-raising charities which cannot afford this.

3.22 However, we note that the charities are not in general unsympathetic to the HEIs' position. They simply do not wish to find themselves providing funding which substitutes for basic costs which, in their view, the Government or the institutions should be providing.

4 The economics of research funding

Cost recovery

4.1 The discussion in HEFCE 02/07a leads to the following conclusions:

- income received by HEIs in respect of nearly all externally funded research is well below the full costs to the HEI of doing the work;
- the actual level of cost recovery to the institution (or the deficit incurred) on typical projects varies between sponsor types (blue skies or 'own-funded' research; Research Council, EU, UK government departments; charity; industry) and by type of project. There is no standard way to compare these recovery rates because different institutions allocate their QR funds in different ways (or to put it another way, there is no unambiguous statement of what QR is deemed to support under the dual support system);
- QR in total is not adequate to support all the externally funded work which does not pay full economic cost;
- in looking at the position for charities, it is most appropriate to compare cost recovery with that on Research Council work;
- HEIs generally receive significantly less for charity-funded projects than for an equivalent Research Council project;
- however, the differences between these two can be much less significant and they depend on what assumptions are used to allocate QR (for examples see HEFCE 02/07a, Appendix D).

Policy considerations

4.2 Funding of a core activity at less than full cost only makes sense if institutions either have spare capacity for research, or are generating significant surpluses on other activities on a consistent basis so that cross-subsidy to research is possible (of course it still might not be desirable). In fact, neither is the case. On the contrary there is ample evidence (see below) of real damage being done to the research base.

4.3 Moreover, such funding is counter to current policy. HEIs are expected to manage their affairs to ensure their own financial stability. This includes a requirement to cover their costs, and to maintain their productive assets. HEIs are not profit-making organisations, and of course many have been substantially funded by the state in the past. This means they should not be expected to make 'profits' on publicly funded or national interest research. However, it is essential that they can recover actual costs of developing and maintaining the research infrastructure required to maintain a UK presence in these fields of work.

4.4 In practice, the current funding system creates perverse incentives which have encouraged a situation which rewards consumption rather than investment, and is damaging to the interests of the national research base:

- institutions need staff. Without charitable research grants, the number of research staff and volume of research would be reduced by about 25%;

- individual academics need publications and a research profile to have any hope of a successful career;
- institutions need a research profile to be able to attract high quality students and staff, business from industry etc (and they know that if they turn down grants another competitor institution will gain them);
- Research Council and charity funding panels wish to fund as many quality projects as possible at the best value they can obtain;
- Government wishes to increase the volume and quality of research, and its contribution to the national economy.

4.5 These drivers effectively conspire to drive up the ratio of consumption to investment of research infrastructure in universities. There is little benefit for any of these parties in forgoing research projects in order to invest in the underpinning infrastructure. In fact, the incentives all encourage the opposite behaviour, and there is little visible damage in the short term from neglecting investment in assets. In a business, 'sweating the assets' (i.e., maximising the return from existing assets) may be a conscious policy, but is unlikely to be sustainable over the long term. It is not appropriate in a publicly funded service concerned with a long-term and internationally competitive activity like research and when there is every expectation that the assets are already in a poor state.

4.6 One might say that the charities have been getting research done 'on the cheap', and that the Government has been getting research of high quality and national importance done without making the contribution to the cost that would be normal if all charity-funded research had been funded through the Science Budget.

4.7 We should note here that the recent initiatives to support research infrastructure (JIF and SRIF), while welcome, do not compensate for the continuing underfunding of the core activity.

4.8 Now that the importance of charity-funded work has grown, and the unintended consequences of these policies have become apparent, it is clear that this situation needs to change.

5 Financial impact

5.1 The under-recovery by HEIs of the costs of research grants and contracts is serious because of the scale of the deficit and its actual and potential impact on the financial health of institutions, and on the research productivity of the UK HE system.

5.2 The impact of this funding deficit is difficult to measure. It would be easy to dismiss it by noting that UK research is still competitive on the world stage, and that no institutions have yet failed financially for reasons connected with overstretch of research activity. However, this would be to ignore a number of danger signs, and also the lost opportunities which are hidden behind current output

figures. Moreover, waiting for a catastrophic failure of UK research before taking action could be the most expensive and damaging way to respond to this situation.

5.3 The funding deficit is evidenced by a number of indicators, all of which point in the same direction, and which add up to a strong body of evidence for the problems we have described. Such indicators include:

- **The under-investment in, and inadequate state of, the physical infrastructure to support research (and teaching).** Studies being done for the OST and for HEFCE/Universities UK will provide evidence of the magnitude of this. They will also provide evidence of the damage to research productivity through (e.g.) missed opportunities; delays and slower progress of research; staff time wasted in maintaining and struggling with antiquated equipment;
- **The overstretch and reduced research productivity of academic staff in terms of long hours and inefficient use of professional academics' time.** There is relevant evidence from the Transparency Review and other studies on long hours; unfavourable ratios of support staff to professionals; and diversion of academic time to support activity;
- **The loss of key staff to other careers.** There is evidence of recruitment difficulties; difficulty of attracting high calibre staff into research, unfilled chairs and research posts;
- **The lost opportunity and reduced research productivity and outcomes.** Examples: charities of HEIs having less time for reflection; a narrower focus of research; evidence from departments of work not done; opportunities to do work to support UK industry which academics cannot take up;
- **The lateral damage, e.g. to innovation in teaching and the student experience.** There is evidence of staff overstretch; Transparency Review figures are showing that surpluses from Other and Non-Publicly Funded Teaching are all required to subsidise research;
- **Distortion of priorities.** There is evidence of institutions at the margin taking better funded but less scientifically valuable work (e.g. commercial rather than strategic clinical trials).

5.4 We have discussed these indicators of damage to the research infrastructure with a large number of staff from a range of HEIs. While it is difficult to obtain quantified evidence in some of these areas, there is widespread agreement that there is a serious problem, which has become more severe in recent years and which is causing significant stress to institutions. The impact of this financial attrition has been to some degree masked by the efforts of academics and HEIs to keep the system going, and by the fact that the deterioration to date has been more of a slow long-term failure to achieve potential rather than an abrupt decline in research output. However, the negative impact on UK research is clear, and more serious and destabilising effects are expected if current trends continue.

5.5 Institutions are rightly cautious about revealing potential weaknesses, but we have no doubt that a number of those most heavily involved in externally funded (and charity-funded) research face serious financial difficulties in the near future.

6 Conclusions for policy

6.1 There is an irrefutable case that the under-funding of research activity is having seriously damaging effects not only on the viability of individual HEIs but also on the productivity of the UK science base and its contribution to the UK economy and to broader social objectives.

6.2 While this is only a part of a larger picture, the current level of cost recovery for charity-funded research is not a basis for viable and mutually beneficial relationships between the charitable and the HE sectors. This is primarily a concern for the institutions which are also those most affected by the more general issues of the dual support system.

6.3 Within the remit of this study, we have to consider a way forward for charity-HEI relationships which will permit them to develop in a mutually beneficial way. While accepting that there is a broader issue, we have to consider what action could be taken specifically to address the issues for charities and HEIs (and to do so in a way which does not prejudice any longer term action).

Options

6.4 These problems cannot be solved by further one-off and ad hoc initiatives (such as JIF and SRIF). The only satisfactory approach will be to reach a position where HEIs have adequate income on a regular and continuing basis to cover the full costs of the activities they are undertaking.

6.5 There are effectively only three broad options that can be considered here (although the solution might be a combination of these), which are:

- **Economic pricing**: charity research sponsors to pay the full economic cost of the research they support;
- **Reduce volume**: the volume of externally funded research to be reduced to the (much lower) level which can be accommodated by HEIs without proper funding of indirect costs;
- **Extend the scope of dual support**: the Government to support all research work of national interest funded by charities through a contribution to the HEIs' indirect costs, as it does for the Research Councils.

6.6 The first option is not appropriate for charities. As noted above, this would be against long-established principles of the charity sector. Charities make the point that they have no control over, or interest in, many of the overhead costs of HEIs. Also, it would require a complex negotiation, and much more openness by HEIs, to

establish what level of indirect costs would be appropriate for charities to pay. In any event, many smaller charities would be unable to pay, and larger ones might refuse. This option would potentially lead to severe damage to the successful research relationship which has been established between the two sectors. There would probably be an immediate and substantial reduction in research activity. It would also be difficult to justify asking charities to pay 'full costs' while neither Research Councils or government departments do so.

6.7 The second option of reducing volume would be difficult to apply in a free economy (and competitive market) where charities and HEIs are able to negotiate on the research work to be carried out. In principle, HEIs could cease to bid for charity projects for which they considered that they did not have adequate infrastructure. However, most consider this unrealistic and that the work would simply be done by others, possibly at lower quality with overall a damaging effect on UK science. An immediate impact of any significant reduction in volume would be the loss of large numbers of HE research staff who would lose their funding and would presumably leave research or go overseas.

6.8 A third possibility would be for Government to fund the underpinning infrastructure required to support some or all charity-funded research work (perhaps that meeting certain criteria of academic quality and relevance to national research policy) in the same way as (in principle) it underpins research funded by Research Councils. The Transparency Review has shown that the present level of dual support funding may need to be looked at more fundamentally, but a first step could be to bring charities and Research Councils onto the same funding basis.

6.9 Specifically within the context of charity-funded research, neither of the first two options on its own would form an acceptable solution, although some movement on pricing and on volumes might contribute to an overall solution. In respect of charity-university research relationships, the third approach offers the best basis for a possible solution – if it formed part of a package that could include elements of contribution from charities and HEIs as well. We consider this further below. Whatever HEFCE decide on the basis of the recommendations below, further discussions between the HE and charity sectors will be necessary so that a package of change can be developed and implemented in partnership.

7 A way forward

7.1 The recommended approach is a tripartite one in which each of the three parties (HEIs, charities, HEFCE/Government) makes a contribution.

7.2 The aim of our recommendations is to put charity-funded research which is of 'national interest' (i.e. of a similar academic quality and relevance to Research Council work) onto a secure financial footing in terms of income to the HEI doing the research. This would mean that HEIs would no longer incur a financial disincentive (or a penalty to their research sustainability) by doing charity-funded research.

7.3 This approach would also 'ring-fence' the research that would receive additional public funding and would permit some forward planning. It would also act as a potential control mechanism, so that the Government would not be making an open-ended commitment to additional funding.

7.4 There is uncertainty about how far the infrastructure costs of Research Council projects are actually supported under the dual support system, because of uncertainty about what these funds are deemed to cover. When framing these recommendations, we made the pragmatic assumption that the deficits institutions incur on Research Council work are fully funded through QR. This is explained in Appendix E of HEFCE 02/07a.

7.5 **Recommendation one:** We recommend that the HEFCE seek from the Government an increase in its research funds so that it can provide an explicit and transparent stream of additional infrastructure support to HEIs on their eligible charity-funded research. This should ideally provide equivalent support to that which HEIs receive directly from Research Councils, plus what they are assumed to receive through the dual support system in respect of Research Council grants. This increased support should only apply to 'Research Council equivalent' work of national benefit which is funded by charities and would be distributed on the basis of past activity.

7.6 On the basis of the assumptions in Appendix E, the total funding difference between equivalent volumes of Research Council and charity funded research is approximately £338m per annum (on a UK basis, at 1999-2000 levels). This reflects the Research Councils' 46% contribution, plus the QR that can be attributed to infrastructure support for Research Councils' projects. If these two elements were added to the funding of charity research, HEIs would have a sustainable basis for such projects and should be able to provide the necessary research infrastructure without requirement for other exceptional support.

7.7 In terms of the recommendation, we assume that only 90% of charity-funded research would be eligible, and that some £50m would be provided by the charities as additional direct costs as recommended below; and a further £30m found by HEIs themselves (support costs to the non-eligible work). The additional sum required by funding councils would therefore be approximately £258m per annum.

7.8 To qualify for this additional support, the two partners (charity and HEI) should commit themselves to fund and manage this research in a way which supports the objectives of sustainability in the national research base. This is covered by recommendations two and three.

The scope of work to be included

7.9 The recommendation would only apply to charity-funded research that is deemed to contribute to national research objectives in the same way that the Research Councils do. We suggest this could be based around the following:

- work of high academic quality carried out under normal academic disciplines of peer review, publication etc, and where the HEI had rights over (at least a share of) any benefits from intellectual property rights (IPR);
- work of public benefit and relevance done in conditions of openness and collaboration rather than competition and secrecy;
- work where the charity sponsor agrees to pay all the direct costs of the research, including the necessary people and project management costs.

7.10 The simplest way to define this would be to invite charities to join an 'approved list' of research funders which would meet some simple agreed criteria and would enjoy the benefit of additional government support (thorough HEFCE funds) to underpin the research infrastructure required to support their work.

7.11 The details of these arrangements need to be developed. An analogous concept of approved funders is already used for NHS R&D. Many charities and universities have accepted the concept of compliance with Department of Health criteria (of quality, relevance, career planning for research staff etc) which are closely related to the conditions that would also be appropriate under the recommendations in this report.

7.12 This kind of arrangement also provides potential for negotiating and planning the total volume of research to be supported (and/or the rates of support), e.g. on a three-year rolling basis, in the light of factors such as the state of the economy and the expected volume of charity funding. This removes any concern that a repeat of the rapid growth in charity funding in the last few years (which was unexpected) could lead to a rapidly rising and potentially uncontrollable burden on HEFCE funds. Providing the funds retrospectively eliminates any risk of an open ended commitment.

7.13 HEIs that want to benefit from additional research infrastructure support funding for charity-funded research should undertake to meet good practice criteria in the management of their research infrastructure.

Action by HEIs

7.14 The HE sector's contribution to this package would consist of adopting a more professional approach to the planning, management, costing, and delivery of charity-funded projects, and to the maintenance of an appropriate research infrastructure. This would involve good practice in four areas (which would have benefits across all research not just that funded by charities):

- A more **strategic approach to the research portfolio** to ensure that the financial and infrastructure implications of projects are considered as well as their academic desirability. This would involve some prioritisation of work, and occasionally decisions not to pursue a particular project, or only to do so under defined conditions which take account of the impact on the institution.
- A **more transparent practice in terms of costing** and claiming direct costs of projects from sponsors. Charities observe that eligible costs are sometimes not claimed by HEIs; but also that there is a tendency by institutions to

'inflate' costs and this in turn encourages charities to 'cheesepare' grant applications. If charities are to be asked to make a more significant contribution to project costs, they need to be assured that they are not being asked to fund inefficiency or general overheads. This will require HEIs to be better informed, and more open, about their costs.

- A more **proactive approach to staff and asset management** of the infrastructure required for research, including the management of staff and careers. It should be seen as the institution's responsibility to identify the level and quality of infrastructure it requires for its chosen research strategy, and to invest to provide and maintain this infrastructure. HEIs might be asked to ensure that any additional HEFCE funding provided for infrastructure for charity research was actually used for this purpose, rather than being used to fund additional staff or research activity.
- **Training and support to academics** and others involved in costing, negotiating and project managing charity-funded research to ensure that the relationship with charities is conducted in a sustainable and business-like manner in terms of meeting the expectations of both parties without damaging the future research capability of the HE sector.

7.15 These good practice steps are worth taking in their own right, even if they do not form part of a tripartite initiative. HEIs lose credibility with their funding partners if they complain about infrastructure and cost recovery when they are not doing all they can to manage these within the existing framework of charity funding. As well as an improvement to cost recovery for some institutions and projects, the approach above would have the further benefits of making the staff involved much more aware of these issues. However, by itself it will lead to only a modest improvement in overall cost recovery.

7.16 **Recommendation two:** We recommend that HEFCE invites institutions which wish to be eligible for additional HEFCE infrastructure support for charity-funded research, to implement the above measures as a condition of funding. This step would form part of a more professional and sustainable approach to research management which we believe is now necessary for those institutions where research is a major part of the core business. Some light-touch reporting or accountability mechanism should be included to ensure compliance, and to reassure charities (and HEFCE) that their additional contributions are being used effectively by HEIs.

Action by charities

7.17 Charities would remain free to negotiate any basis they are able to with individual HEIs. They should continue to be flexible about pricing, and in particular could expect HEIs to be rather more aware of, and persistent in seeking, full direct costs of all projects on their applications.

7.18 Charities which are very small, or are occasional funders of research, may be unable to pay any more than they currently do for research projects. It would be up to them to negotiate terms with their HEI partners.

7.19 However, many charities would be able and willing to do more than this.

7.20 **Recommendation three:** We recommend that charities be invited to join an approved list which would undertake to meet additional conditions in terms of their research funding in HEIs. In return, they would benefit from knowing that the HEIs where they funded research would receive additional support for the research careers and infrastructure required for this area of research.

7.21 These charities should continue to pay the full direct costs of projects, including the costs of project and staff management necessary to sustain the research base and to deliver quality outcomes. These are real costs of research (not overheads) which are currently often neglected when projects are costed. Many charities do support this already in a less formal manner. Overall, this would lead to a (modest) increase in the average direct project costs charities are asked to provide. We estimate that, as a maximum, this could amount to an additional contribution of 15% of direct staff costs.

7.22 This cost sharing would be more acceptable to charities if accompanied by an improvement in transparency of HEI costing so that charities understood what they were being asked to fund, and how it contributed to their research work. Partnership in these areas could also be helped if charities were invited to enter into periodic discussions with the HE sector and to contribute to policies and plans for this area of work.

7.23 As a result of the good practice measures for HEIs and the additional funding from HEFCE, charities could expect to find the equivalent of the 'well-found laboratory' in all HEIs working under this agreement, and they would not expect (except in schemes specifically for this purpose) to receive requests to contribute to the normal running costs or infrastructure costs of institutions.

Implementation

7.24 Some of the details here need further consideration by both the charity and HE sectors, once HEFCE have decided their general policy for taking this report forward. A key issue will be how additional infrastructure support is distributed amongst institutions. The mechanism selected for distribution needs to recognise the extreme pressures on a small number of institutions, but not to discourage charities from funding high quality work in institutions and departments which are not given a high rating by the RAE. It also needs to avoid giving perverse incentives to inflate activity as opposed to investing in infrastructure.

7.25 There would be advantages for the research relationships between the HE and charity sectors in having a forum for discussing the issues raised by this report.

7.26 **Recommendation four:** A small group should be established with representation from HEFCE, HE institutions, and the charities sector. Initially, this should be a time-limited group to advise on implementation of this report. However, there could be benefit in the longer term in having a forum for discussion of issues of mutual interest between the two sectors, and this might be considered by the implementation group.

Conclusions

7.27 We believe that if these recommendations were implemented, charity-funded projects would be significantly better resourced, and better managed. Their funding would make an explicit contribution to maintaining the research infrastructure on which they depend. This would provide a more secure and mutually beneficial basis for these research relationships than the present basis, which is not sustainable. It is the minimum required to protect this very important part of the UK research base, and to enable it to realise its full potential.

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